

## REMARKS

Applicant respectfully requests consideration of the subject application as amended herein. This Amendment supplements the Amendment filed on September 30, 2003 in response to an Office Action mailed on August 28, 2003. In this Amendment, claims 1, 2, 4, 6, 8, 10, 12, 13, 18, 21, 24, 25, 26, 27, 29 and 30 have been amended. Claims 22 and 23 have been cancelled without prejudice. No new matter has been added.

As discussed below, the pending claims are patentable over the references previously cited by the examiner, i.e., Huang, et al., ("Exploiting Basic Block Value Locality with Block Reuse," hereinafter "Huang") and Kulkarni, et al., (U.S. Patent No. 5,742,805, hereinafter "Kulkarni").

Huang discloses a mechanism that records input and live output values of basic blocks to provide reuse at the basic block level. In Huang, a block history buffer is used to store input and live output values resulting from prior executions of each basic block. When the entry point to a block is encountered in the execution of a program, the buffer is searched for matching data. If matching data is found, the processor jumps to the subsequent block. If matching data is not found, the current block is executed as usual (page 14, last paragraph). Thus, Huang does not teach or suggest predicting current live-out values if no valid match is found, as does the presently claimed invention. Accordingly, Huang lacks the features that are included in the following language of claim 1:

...searching a plurality of instances of the reuse region for a valid matching instance that has matching input data and cannot be potentially invalidated; and  
if the valid matching instance is not found, predicting, for the reuse region, a current set of live-out values using reuse region instance information pertaining to the plurality of instances of the reuse region.

Similar language is also included in independent claims 8, 18 and 24. Thus, claims 1, 8, 18 and 24 and their corresponding dependent claims are patentable over Huang.

Kulkarni does not help Huang to render the presently claimed invention unpatentable because Kulkarni lacks at least the same features that are missing from Huang.

Thus, the present invention as claimed in independent claims 1, 8, 18 and 24 and their corresponding dependent claims is patentable over the cited prior art references.

Therefore, Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. §§102(b) and 103(a). Applicants furthermore submit that all pending claims are in condition for allowance, which action is earnestly solicited.

**Deposit Account Authorization**

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Marina Portnova at (408) 720-8300.

Respectfully submitted,

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